Amendments to the Claims

The following listing of the claims replaces all previous amendments and listings of the claims.

1.-16. (Canceled)

17. (Currently Amended) Bioreactor ~~for cultivating organic material by a nutrient medium, which can be put into a flow,~~ comprising:

~~a housing;~~

~~a receiving device arranged in the housing, which has a receiving space for the organic material that can be flowed through by the nutrient medium;~~

a cell comprising:

first, second, and third carrier plates having predetermined thicknesses disposed between top and bottom covers;

~~at least~~ two partition wall elements~~, which enclose the receiving space and each~~ having ~~a membrane, which is~~ membranes configured to be permeable to ~~the~~ a nutrient medium and ~~are~~ substantially impermeable to ~~the~~ an organic material cultivated in the cell, the two partition wall elements disposed in the first and third carrier plates; and

a carrier element~~, arranged in the receiving space, which is~~ configured to be permeable to the nutrient medium and ~~is configured as a fabric for an~~ to permit adhesion of the organic material thereto, the carrier element disposed in the second carrier plate between the first and third carrier plates;

~~wherein~~

~~the housing is constructed as a flat cell having annular carrier plates,~~

~~the partition wall elements have a supporting fabric, to which the membrane is applied, and~~

~~both the supporting fabric with the applied membrane and the fabric of the carrier element are each mounted in an annular carrier plate;~~.

18. (Currently Amended) Bioreactor according to claim 17, wherein the carrier element ~~has~~ comprises a three-dimensional structure.

19. (Currently Amended) Bioreactor according to claim 17, wherein the carrier element ~~includes~~ comprises a textile carrier material.

20. (Currently Amended) Bioreactor according to claim 19, wherein the textile carrier material is surface-treated, and a bio-compatible surface is formed with a structure adapted for ~~an~~ adhesion of the organic material.

21. (Currently Amended) Bioreactor according to claim 17, wherein ~~a receiving device of the flat cell is designed circularly~~ at least one of the two partition wall elements and the carrier element is disposed in a circular void defined in the carrier plates.

22. (Currently Amended) Bioreactor according to claim 17, wherein a ~~number~~ plurality of ~~flat~~ cells are arranged ~~as modules in one flow direction~~ in at least one of ~~a~~ parallel and serial ~~fashion~~.

23. (Currently Amended) Bioreactor according to claim 17, further comprising:

a control device ~~by which~~ configured to control at least one of a flow generating device, a temperature adjusting unit, a gasing unit, and a degasing unit~~, and further supply units can be controlled~~.

24. (Currently Amended) Bioreactor according to claim 23, further comprising:

a sensor device ~~arranged in one flow direction after the receiving space, by which~~ connected to the control device and configured to determine at least one of a physical and a chemical ~~values of a state~~ property of the nutrient medium ~~can be determined; and the sensor device is connected to the control device~~.

25. (Currently Amended) Bioreactor according to claim 17, further comprising:

~~a closed housing in which the receiving device is arranged; and~~

~~at least one feed and one discharge are provided~~ means for feeding and discharging the nutrient medium ~~as well as an access~~ to the cell; and

means for introducing and removing the organic material from the cell.

26. (Currently Amended) Method for cultivating the organic material, ~~wherein~~ comprising:

~~a nutrient medium is at least temporarily put into a flow,~~

~~the organic material is introduced into a receiving device of a bioreactor,~~

~~the nutrient medium is passed through the receiving device of the bioreactor for a convective supply of the organic material, and~~

~~a bioreactor according to claim 17 is used~~ introducing the organic material to the carrier element of the bioreactor of claim 17; and

passing the nutrient medium between the two partition wall elements to the carrier element.

27. (Currently Amended) Method according to claim 26, ~~wherein prior to an inoculation or introduction of the organic material into the receiving device this is sterilized~~ further comprising:

sterilizing the carrier element prior to introducing the organic material to the carrier element.

28. (Currently Amended) Method according to claim 26, ~~wherein prior to a removal of the cultivated organic material from the receiving device a medium, in particular an enzyme, is introduced for detaching adhered organic material~~ further comprising:

introducing an enzyme adapted to detach the adhered organic material from the carrier element.

29. (Currently Amended) Method according to claim 26, ~~wherein the direction of flow of the nutrient medium that is passed through the receiving device is changed during cultivation of the organic material~~ further comprising:

changing a direction of flow of the nutrient medium through the carrier element during detachment of the organic material from the carrier element.

30. (Currently Amended) Method according to claims 26, ~~wherein at least one of~~ further comprising:

changing one of a chemical and physical ~~state~~ property ~~of the nutrient medium~~, a stoichiometrical composition, a temperature, a pressure ~~or~~, and a rate of flow~~, are specifically changed during the cultivation~~ of the nutrient medium during detachment of the organic material from the carrier element.

31. (Currently Amended) Method according to claim 26, ~~wherein~~

~~at least after passing the nutrient medium through the receiving device~~ further comprising:

measuring at least one of a chemical and a physical ~~values of state~~ property of the nutrient medium ~~are measured,~~;

~~the measured values of state are recorded and analyzed in a control device, and~~

~~the measured values of state are employed for~~

analyzing the measured property; and

controlling ~~the cultivation~~ detachment of the organic material from the carrier element based on the analyzed property.

32. (Currently Amended) Method according to claim 26, ~~wherein~~ further comprising:

passing the nutrient medium ~~is passed~~ through ~~a number of receiving devices, which are~~ multiple cells arranged ~~to each other~~ in at least one of a parallel and serial ~~fashion~~.